

Amendments to Claims:

This listing of claims will replace all prior versions and listings of the claims in the application:

Listing of Claims:

1. (currently amended) A head drum assembly of a tape recorder, comprising:
a shaft;
a rotary drum which supports a magnetic head for recording and reproducing information by scanning a running magnetic tape, the rotary drum having an axial bore with an upper recess and lower recess;
a fixed drum, press-fitted onto a lower part of the shaft, engaged on an the axial bore of the rotary drum, parallel to the rotary drum;
an upper bearing having an inner race and an outer race, the outer race being press-fit into the upper recess of the axial bore of the rotary drum, the inner race being press-fit around the shaft;
and a lower bearing, having an inner race and an outer race, the outer race being press-fit into the lower recess of the axial bore of the rotary drum, the inner race being press-fit around the shaft provided one on the other between the rotary drum and the shaft; and
an elastic body mounted on the circumferential surface of the shaft between the inner races of the upper and lower bearings, the elastic body directly contacting the inner races to generate a preload force at a predetermined angle with respect to the shaft.
preloading means for applying preload to the upper and lower bearings.
2. (cancelled)
3. (currently amended) The head drum assembly of a tape recorder, wherein the elastic body comprises a coil spring.
4. (currently amended) A head drum assembly of a tape recorder, comprising:
a shaft;

a rotary drum which supports a magnetic head for recording and reproducing information by scanning a running magnetic tape, the rotary drum having an axial bore with an upper recess and lower recess;

a fixed drum, press-fitted onto a lower part of the shaft, engaged on an axial bore of the rotary drum, parallel to the rotary drum;

an upper bearing having an inner race and an outer race, the outer race being press-fit into the upper recess of the axial bore of the rotary drum, the inner race being press-fit around the shaft;

and a lower bearing, having an inner race and an outer race, the outer race being press-fit into the lower recess of the axial bore of the rotary drum, the inner race being press-fit around the shaft provided one on the other between the rotary drum and the shaft; and

a preload apparatus which applies a preload to the upper and lower bearings.

an elastic body for generating a preload force which is directed at a predetermined angle from the shaft on the inner races of the bearings.

5. (cancelled)

6. (currently amended) The head drum assembly of a tape recorder according to claim 4 5, wherein the elastic body comprises a coil spring.

7. (cancelled)

8. (currently amended) The head drum assembly of a tape recorder according to claim 6, claim 4, wherein the preload is applied to the inner race of the upper bearing in an upward direction, direction.

9. (currently amended) The head drum assembly of a tape recorder according to claim 6, claim 4, wherein the preload is applied to the inner race of the lower bearing in a downward direction.

10. (cancelled)

11-16. (cancelled)

17. (new) The head drum assembly of a tape recorder according to claim 1, wherein the predetermined angle is approximately 30°.

18. (new) The head drum assembly of a tape recorder according to claim 4, wherein the predetermined angle is approximately 30°.

19. (new) The head drum assembly of a tape recorder according to claim 8, wherein the coil spring directly contacts the inner race of the upper bearing without contacting the outer race of the upper bearing.

20. (new) The head drum assembly of a tape recorder according to claim 9, wherein the coil spring directly contacts the inner race of the lower bearing without contacting the outer race of the lower bearing.

21. (new) A head drum assembly of a tape recorder, comprising:

a shaft;

a rotary drum which supports a magnetic head for recording and reproducing information by scanning a running magnetic tape, the rotary drum having an axial bore with an upper recess and lower recess;

a fixed drum, press-fitted onto a lower part of the shaft, engaged on an axial bore of the rotary drum, parallel to the rotary drum;

an upper bearing having an inner race and an outer race, the outer race being press-fit into the upper recess of the axial bore of the rotary drum, the inner race being press-fit around the shaft;

a lower bearing, having an inner race and an outer race, the outer race being press-fit into the lower recess of the axial bore of the rotary drum, the inner race being press-fit around the shaft; and

means for generating a preload force which is directed at a predetermined angle from the shaft on the inner races of the bearings.

22. (new) The head drum assembly of a tape recorder according to claim 21, wherein the means for generating a preload force comprises a coil spring.

23. (new) The head drum assembly of a tape recorder according to 22, wherein the coil spring directly contacts the inner race of the upper bearing to generate a preload force in an upward direction.

24. (new) The head drum assembly of a tape recorder according to 23, wherein the coil spring directly contacts the inner race of the lower bearing to generate a preload force in an downward direction.

25. (new) The head drum assembly of a tape recorder according to claim 24, wherein the predetermined angle is approximately 30°.